



# **STIC Search Report**

## **Biotech-Chem Library**

**STIC Database Tracking Number: 146175**

**TO: Janet Epps-Ford  
Location: REM 2C18  
Art Unit: 1635  
Friday, March 04, 2005**

**Case Serial Number: 09/438365**

**From: Mary Hale  
Location: Biotech/Chem Library  
Rem 1D86  
Phone: 2-2507**

**Mary.Hale@uspto.gov**

### **Search Notes**

**Feel free to contact me if you have any questions.**

## SEARCH REQUEST FORM

Scientific and Technical Information Center

FEB 25 2005

Requester's Full Name: Tanet Epps-Ford Examiner #: 76570 Date: 2-25-05  
 Art Unit: 1635 Phone Number 30 571/272-075 Serial Number: 09/438,365  
 Mail Box and Bldg/Room Location: 2C/8 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

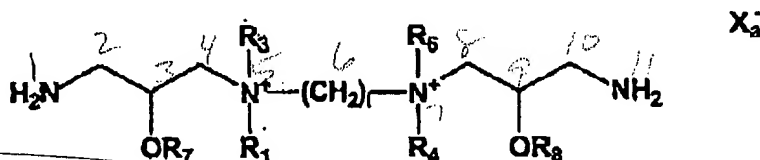
Title of invention: Transfection Reagents

Inventors (please provide full names): Yongliang Chu, Malek Masoud,  
Guliat Gebeyehu

Earliest Priority Filing Date: 11/12/1998

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

12. (Currently amended) A compound having the formula:



wherein

X<sup>-</sup> is a physiologically acceptable anion;

a is the number of anions which is equal to the number of positive charges in the compound divided by the valence of the anion;

R<sub>1</sub>, R<sub>3</sub>, R<sub>4</sub>, and R<sub>6</sub>, independently of one another, are selected from the group consisting of H, an alkyl group, an alkenyl group, an alkynyl group, and an aryl group, wherein any one of R<sub>1</sub>, R<sub>3</sub>, R<sub>4</sub>, and R<sub>6</sub> are optionally substituted by one or more of an alcohol, an amine, an amide, an ether, a polyether, a polyamide, an ester, a mercaptan, a urea, a thiourea, a guanidyl, or a carbamoyl group, and at least two of R<sub>1</sub>, R<sub>3</sub>, R<sub>4</sub>, and R<sub>6</sub>, are straight-chain, branched, or cyclic alkyl, alkynyl, or alkenyl or aryl groups having from 8 to about 24 carbon atoms attached to each N and R<sub>1</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>6</sub> may optionally be covalently linked with each other;

R<sub>7</sub> and R<sub>8</sub> are independently H or a carbohydrate; and

l is an integer from 1 to about 4.

\*\*\*\*\*

STAFF USE

Searcher: [Signature]

NA Sequence (#) \_\_\_\_\_

STN \_\_\_\_\_

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938-48

43  
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Epps - Ford  
09/438365

=> dis his

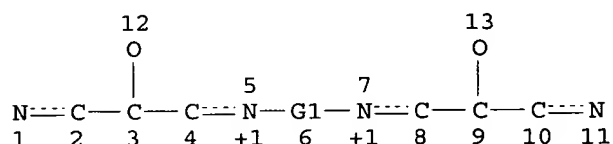
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FILE 'REGISTRY' ENTERED AT 09:37:57 ON 04 MAR 2005

FILE 'REGISTRY' ENTERED AT 09:38:50 ON 04 MAR 2005

L1 STR  
L2 0 S L1  
L3 0 S L1 FUL  
L4 STR L1  
L5 2 S L4  
L6 40 S L4 FUL  
L7 STR L4  
L8 0 SEARCH L7 SUB=L6 FUL

=> d l8 que stat;d l6 que stat;fil hcaplu;s l6  
L4 STR



REP G1=(1-4) CH2

NODE ATTRIBUTES:

CHARGE IS E+1 AT 5

CHARGE IS E+1 AT 7

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

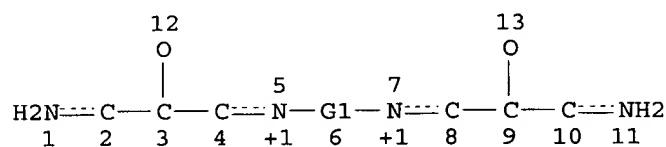
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NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

L6 40 SEA FILE=REGISTRY SSS FUL L4

L7 STR



REP G1=(1-4) CH2

NODE ATTRIBUTES:

CHARGE IS E+1 AT 5

CHARGE IS E+1 AT 7

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

L8 0 SEA FILE=REGISTRY SUB=L6 SSS FUL L7

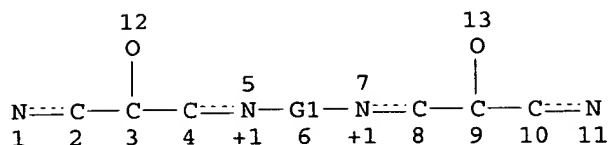
100.0% PROCESSED 40 ITERATIONS

0 ANSWERS

Searched by: Mary Hale 571-272-2507 REM 1D86

SEARCH TIME: 00.00.01

L4 STR



REP G1=(1-4) CH2

NODE ATTRIBUTES:

CHARGE IS E+1 AT 5

CHARGE IS E+1 AT 7

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

L6 40 SEA FILE=REGISTRY SSS FUL L4

100.0% PROCESSED 62117 ITERATIONS

40 ANSWERS

SEARCH TIME: 00.00.01

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
362.86	877.32

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
0.00	-5.54

CA SUBSCRIBER PRICE

FILE 'HCAPLUS' ENTERED AT 09:43:19 ON 04 MAR 2005

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FILE COVERS 1907 - 4 Mar 2005 VOL 142 ISS 10

FILE LAST UPDATED: 2 Mar 2005 (20050302/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

Searched by: Mary Hale 571-272-2507 REM 1D86

L9

3 L6

=&gt; d 1-3 cbib abs hitstr;fil caol;s 16

L9 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN

1993:175030 Document No. 118:175030 Effects of ionene polymers structure on breaking of dodecane/water emulsion. Murai, Koichi; Narita, Miyuki; Serita, Hajime; Hamada, Fumio (Min, Coll., Akita Univ., Akita, Japan). Akita Daigaku Kozangakubu Kenkyu Hokoku, 13, 25-30 (Japanese) 1992. CODEN: KHADD3. ISSN: 0389-8040.

AB The effect of polymer addition on the breaking of dodecane/water emulsions stabilized by p-nonylphenyl poly(oxyethylene) ether was studied by use of an ionene polymer having functional group A (alkylene), O (oxyethylene), Am (N-methylaminoethylene), U (trimethyleneureylenetrimethylene), and OH (2-hydroxytrimethylene). The preceding paper reported the influence of A, O, and Am groups on the breaking effect. In this paper that of U and OH groups was reported, and the effect of the polymer structure on the emulsion breaking was discussed. The residual dodecane concentration in the emulsion breaking decreased in the order of A > U > OH > O > Am, and the optimum polymer dosage increased in the order of A < Am < U < OH < O. Branched chain polymers were particularly effective in reducing the residual dodecane concentration

IT 118596-87-5 146840-10-0

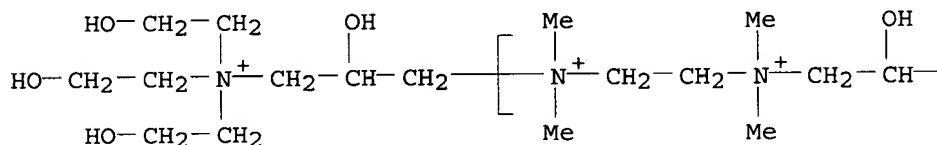
RL: PROC (Process)

(emulsion breaking with, of dodecane-water emulsions)

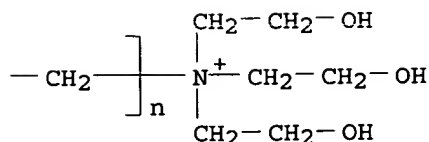
RN 118596-87-5 HCAPLUS

CN Poly[(dimethyliminio)-1,2-ethanediyl(dimethyliminio)(2-hydroxy-1,3-propanediyl) dichloride],  $\alpha$ -[2-hydroxy-3-[tris(2-hydroxyethyl)ammonio]propyl]- $\omega$ -[tris(2-hydroxyethyl)ammonio]-, dichloride (9CI) (CA INDEX NAME)

PAGE 1-A

● 2 Cl<sup>-</sup>● 2 Cl<sup>-</sup>

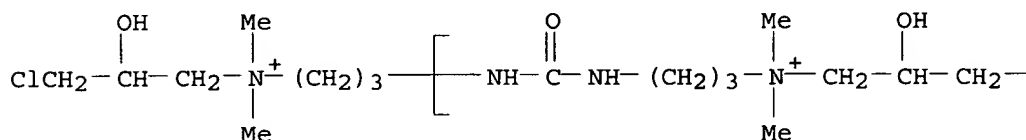
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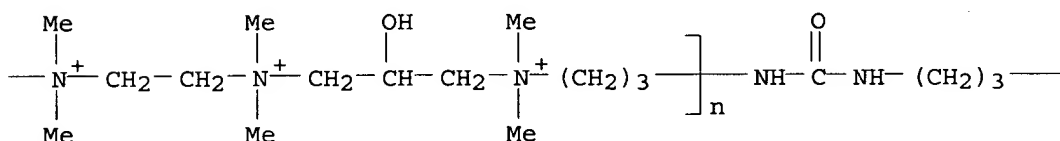
RN 146840-10-0 HCAPLUS

CN Poly[iminocarbonylimino-1,3-propanediyl(dimethyliminio)(2-hydroxy-1,3-propanediyl)(dimethyliminio)-1,2-ethanediyl(dimethyliminio)(2-hydroxy-1,3-propanediyl)(dimethyliminio)-1,3-propanediyl tetrachloride],  
 $\alpha$ -[3-[(3-chloro-2-hydroxypropyl)dimethylammonio]propyl]- $\omega$ -  
[[[3-[(3-chloro-2-hydroxypropyl)dimethylammonio]propyl]amino]carbonyl]ami  
no]-, dichloride (9CI) (CA INDEX NAME)

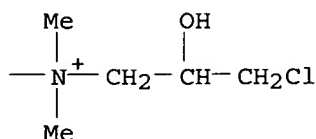
PAGE 1-A



PAGE 1-B



PAGE 1-C



L9 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN

1989:76340 Document No. 110:76340 Polymeric quaternary ammonium compounds, their preparation and use. Fenyés, Joseph G.; Pera, John D. (Buckman Laboratories International, Inc., USA). U.S. US 4778813 A 19881018, 12 pp. Cont. of U.S. Ser. No. 280,974, abandoned. (English). CODEN: USXXAM. APPLICATION: US 1985-696575 19850130. PRIORITY: US 1981-280974 19810707.

AB The quaternary ammonium polymers  $[\text{R}_2\text{N}(\text{R}_1)\text{CH}_2\text{CH}(\text{OH})\text{CH}_2[\text{ZCH}_2\text{CH}(\text{OH})\text{CH}_2]_n\text{N}(\text{R}_1)\text{R}_2]+2.2\text{Cl}^-$  [ $\text{R} = \text{Me}$ , C5-22 alkyl (optionally unsatd.), cyclohexyl,  $\text{PhCH}_2$ ,  $\text{Ph}$ ;  $\text{R}_1 = \text{Me}$ , Et, Pr, Bu, C2-3 hydroxyalkyl; or  $\text{R} + \text{R}_1$  form a pyridyl ring;  $\text{Z} = [-\text{N}(\text{Me})_2\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_2\text{N}(\text{Me})_2-]_2+2.2\text{Cl}^-$ ,  $n = \text{odd number (1-201)}$ ] are useful as microbicides, corrosion inhibitors, debonding agents, flocculants, softeners, and emulsion breakers. Refluxing 2 mol 65.7% aqueous  $[\text{ClCH}_2\text{CH}(\text{OH})\text{CH}_2\text{N}(\text{Me})_2\text{CH}_2\text{CH}_2\text{N}(\text{Me})_2\text{CH}_2\text{CH}(\text{OH})\text{CH}_2\text{Cl}]+2.2\text{Cl}^-$  [prepared from epichlorohydrin and  $\text{Me}_2\text{NCH}_2\text{CH}_2\text{NMe}_2$  (I)] with 1 mol I for 1 h gave a 65.8% aqueous solution of quaternary ammonium polymer (II). At pH 6.0-6.5, 7.0-7.5, and 8.0-8.5, the concentration of II required to kill  $\geq 80\%$  Enterobacter aerogenes in 18 h was 2.0, 2.0-4.0, and 4.0 ppm, resp.

IT 103381-23-3DP, polymers with dicocomethylamine  
103710-02-7P 118596-86-4P 118596-87-5P  
118596-88-6P 118596-89-7P 118655-02-0P

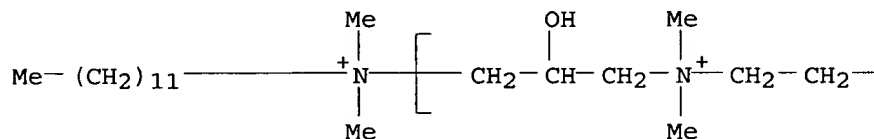
RL: PRP (Properties); PREP (Preparation)

(preparation and properties of)

RN 103381-23-3 HCAPLUS

CN Poly[(dimethyliminio)-1,2-ethanediyl(dimethyliminio)(2-hydroxy-1,3-propanediyl) dichloride],  $\alpha$ -[3-(dodecyldimethylammonio)-2-hydroxypropyl]- $\omega$ -(dodecyldimethylammonio)-, dichloride (9CI) (CA INDEX NAME)

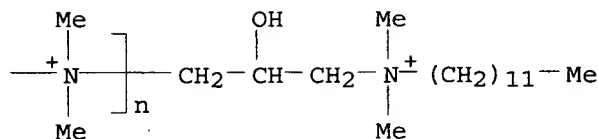
PAGE 1-A



● 2 Cl<sup>-</sup>

● 2 Cl<sup>-</sup>

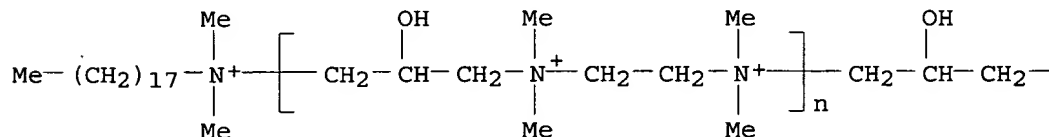
PAGE 1-B



RN 103710-02-7 HCAPLUS

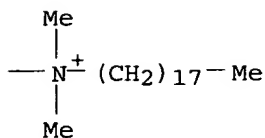
CN Poly[(dimethyliminio)-1,2-ethanediyl(dimethyliminio)(2-hydroxy-1,3-propanediyl) dichloride],  $\alpha$ -[3-(dimethyloctadecylammonio)-2-hydroxypropyl]- $\omega$ -(dimethyloctadecylammonio)-, dichloride (9CI) (CA INDEX NAME)

PAGE 1-A



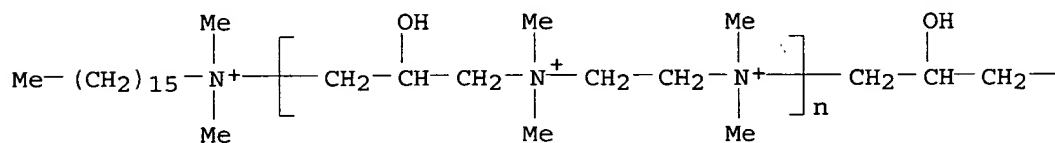
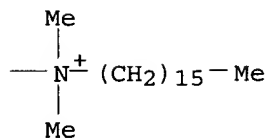
● 2 Cl<sup>-</sup>

● 2 Cl<sup>-</sup>



RN 118596-86-4 HCAPLUS

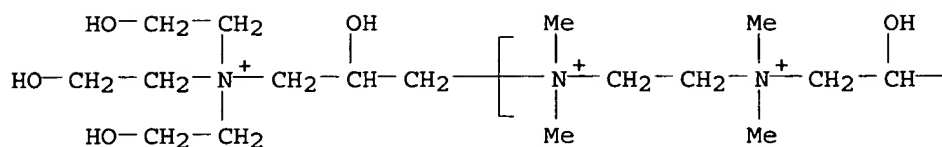
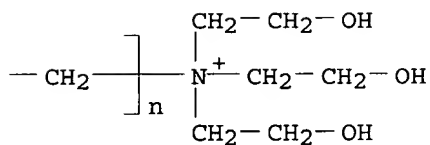
CN Poly[(dimethylininio)-1,2-ethanediyl(dimethylininio)(2-hydroxy-1,3-propanediyl) dichloride],  $\alpha$ -[3-(hexadecyldimethylammonio)-2-hydroxypropyl]- $\omega$ -(hexadecyldimethylammonio)-, dichloride (9CI) (CA INDEX NAME)

● 2 Cl<sup>-</sup>● 2 Cl<sup>-</sup>

RN 118596-87-5 HCAPLUS

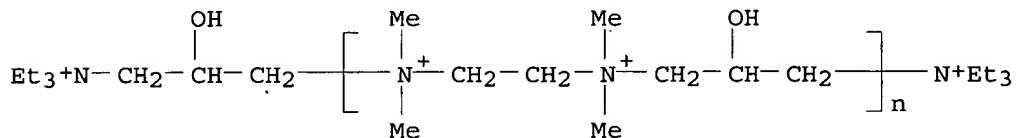
CN Poly[(dimethylininio)-1,2-ethanediyl(dimethylininio)(2-hydroxy-1,3-propanediyl) dichloride],  $\alpha$ -[2-hydroxy-3-[tris(2-hydroxyethyl) ammonio]propyl]- $\omega$ -[tris(2-hydroxyethyl) ammonio]-, dichloride (9CI) (CA INDEX NAME)



● 2 Cl<sup>-</sup>● 2 Cl<sup>-</sup>

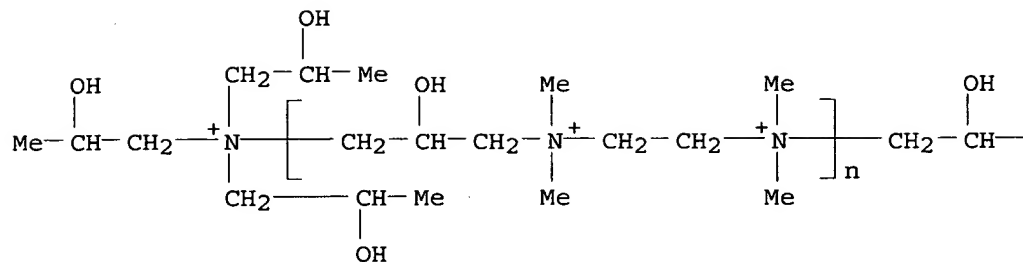
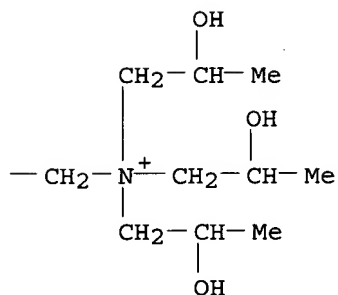
RN 118596-88-6 HCAPLUS

CN Poly[(dimethyliminio)-1,2-ethanediyl(dimethyliminio)(2-hydroxy-1,3-propanediyl) dichloride], α-[2-hydroxy-3-(triethylammonio)propyl]-ω-(triethylammonio)-, dichloride (9CI) (CA INDEX NAME)

● 2 Cl<sup>-</sup>● 2 Cl<sup>-</sup>

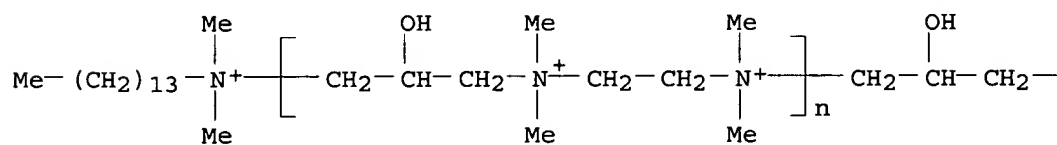
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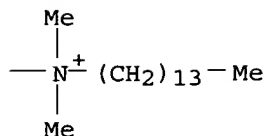
CN Poly[(dimethyliminio)-1,2-ethanediyl(dimethyliminio)(2-hydroxy-1,3-propanediyl) dichloride], α-[2-hydroxy-3-[tris(2-hydroxypropyl)ammonio]propyl]-ω-[tris(2-hydroxypropyl)ammonio]-, dichloride (9CI) (CA INDEX NAME)

● 2 Cl<sup>-</sup>● 2 Cl<sup>-</sup>

RN 118655-02-0 HCAPLUS

CN Poly[(dimethyliminio)-1,2-ethanediyl(dimethyliminio)(2-hydroxy-1,3-propanediyl) dichloride], α-[3-(dimethyltetradecylammonio)-2-hydroxypropyl]-ω-(dimethyltetradecylammonio)-, dichloride (9CI) (CA INDEX NAME)

● 4 Cl<sup>-</sup>

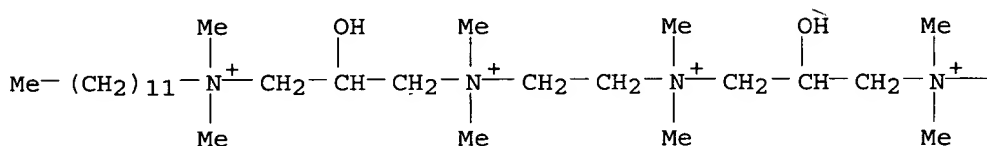


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 118596-85-3P 118901-97-6P 118901-98-7P  
 118955-20-7P

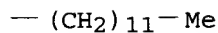
RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and uses of)

RN 103526-33-6 HCAPLUS

CN 1,3-Propanediaminium, N,N''-1,2-ethanediylbis[N'-dodecyl-2-hydroxy-  
 N,N,N',N'-tetramethyl-, tetrachloride (9CI) (CA INDEX NAME)

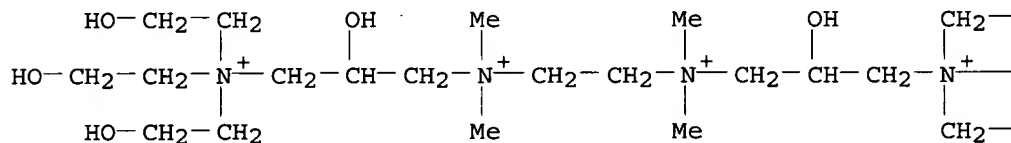


●4 Cl<sup>-</sup>



RN 103526-34-7 HCAPLUS

CN 1,3-Propanediaminium, N,N''-1,2-ethanediylbis[2-hydroxy-N',N',N'-tris(2-  
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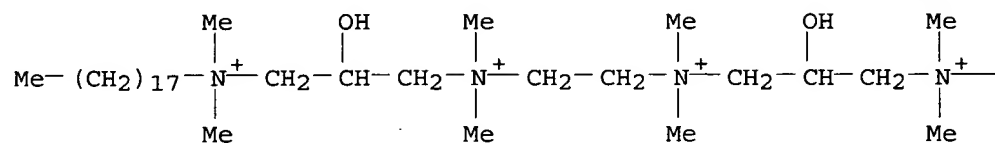


●4 Cl<sup>-</sup>

$\text{---CH}_2\text{---OH}$ 
 $\text{---CH}_2\text{---CH}_2\text{---OH}$ 
 $\text{---CH}_2\text{---OH}$ 

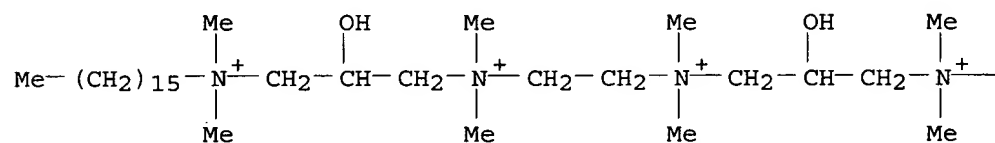
RN 103548-76-1 HCAPLUS

CN 1,3-Propanediaminium, N,N''-1,2-ethanediylbis[2-hydroxy-N,N,N',N'-tetramethyl-N'-octadecyl-, tetrachloride (9CI) (CA INDEX NAME)

●4 Cl<sup>-</sup>
 $\text{---(CH}_2\text{)}_{17}\text{---Me}$ 

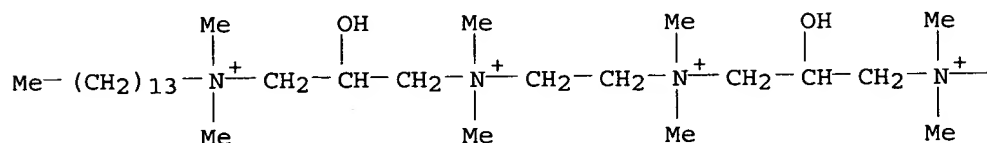
RN 118596-85-3 HCAPLUS

CN 1,3-Propanediaminium, N,N''-1,2-ethanediylbis[N'-hexadecyl-2-hydroxy-N,N,N',N'-tetramethyl-, tetrachloride (9CI) (CA INDEX NAME)

●4 Cl<sup>-</sup>
 $\text{---(CH}_2\text{)}_{15}\text{---Me}$

RN 118901-97-6 HCAPLUS  
 CN 1,3-Propanediaminium, N,N''-1,2-ethanediylbis[2-hydroxy-N,N,N',N'-tetramethyl-N'-tetradecyl-, tetrachloride (9CI) (CA INDEX NAME)

PAGE 1-A

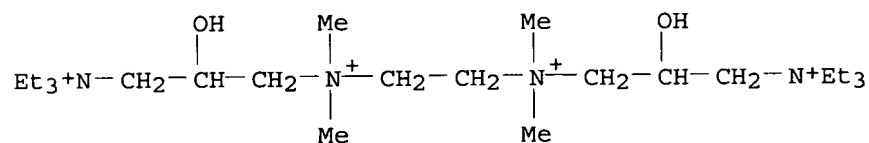


● 4 Cl<sup>-</sup>

PAGE 1-B

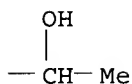
— (CH<sub>2</sub>)<sub>13</sub>—Me

RN 118901-98-7 HCAPLUS  
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● 4 Cl<sup>-</sup>

RN 118955-20-7 HCAPLUS  
 CN 1,3-Propanediaminium, N,N''-1,2-ethanediylbis[2-hydroxy-N',N',N'-tris(2-hydroxypropyl)-N,N-dimethyl-, tetrachloride (9CI) (CA INDEX NAME)]

$\bullet_4 \text{Cl}^-$ 

1986:479564 Document No. 105:79564 Ionene-type polymers. Fenyves, Joseph Gabriel; Pera, John Dominic (Buckman Laboratories, Inc., USA). Brit. UK Pat. Appl. GB 2160538 A1 19851224, 19 pp. (English). CODEN: BAXXDU. APPLICATION: GB 1984-15965 19840622.

AB The ionene polymers have the formula  $\text{RR}_{12}\text{N}+\text{CH}_2\text{CH}(\text{OH})\text{CH}_2[\text{ZCH}_2\text{CH}(\text{OH})\text{CH}_2]_n\text{N}+\text{R}_{12}\text{R}$  ( $2n + 2$ ) $\text{Cl}^-$  [ $\text{R} = \text{Me}$  and  $\text{R}_1 = \text{Me}$ , C6-18 alkyl, alkenyl, alkadienyl, cyclohexyl; or  $\text{R} = \text{R}_1 = \text{Et}$ , Pr, Bu, hydroxyethyl, hydroxypropyl; or  $\text{NR}_{12} = \text{piperidyl}$  or  $\text{NRR}_{12} = \text{pyridyl}$ ;  $\text{Z} = \text{NMe}_2(\text{CH}_2)_m\text{NMe}_2$ ,  $\text{NMe}_2\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_2\text{NMe}_2$ ,  $\text{N,N}'\text{-dimethylpiperazine}$ ;  $m = 2\text{-}12$ ;  $n = 1\text{-}201$  (odd only)] and are prepared by the reaction of  $\text{ClCH}_2\text{CH}(\text{OH})\text{CH}_2\text{ZCH}_2\text{CH}(\text{OH})\text{CH}_2\text{Cl}$  with a tertiary diamine, and then further treating this precursor with 2 mol of a tertiary monoamine. These ionene polymers are useful as plant growth regulators, waterproofing agents, textile additives, fungicides, and cellulose pulp additives. Thus, 187.8 g of a 61% aqueous solution of  $\text{Me}_2\text{NCH}_2\text{CH}_2\text{NMe}_2$  was cooled in an ice bath, and 2 mol 37%  $\text{HCl}$  was added at a rate to keep the temp  $<45^\circ$ . To this stirred solution, 185.0 g epichlorohydrin was slowly added. The mixture was heated ( $60\text{-}70^\circ$ ) for 30 min and then precipitated with acetone, filtered, and dried over P205. One mole of a 65.7% aqueous solution of the above product was reacted at reflux temperature for 4 h with 2 mol n-dodecyldimethylamine to give a final product having 80.5% solids content.

IT 103381-23-3P 103526-33-6P 103526-34-7P  
103526-37-0P 103526-38-1P 103526-39-2P

103526-40-5P 103548-76-1P 103548-77-2P

103710-02-7P

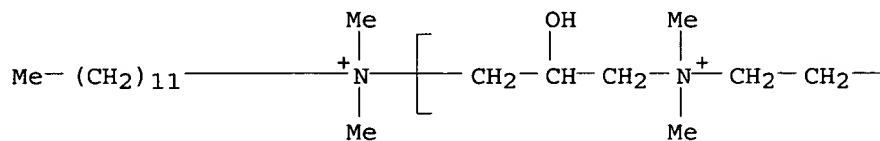
RL: PREP (Preparation)

(preparation of)

RN 103381-23-3 HCAPLUS

CN Poly[(dimethylininio)-1,2-ethanediyl(dimethylininio)(2-hydroxy-1,3-propanediyl) dichloride],  $\alpha$ -[3-(dodecyldimethylammonio)-2-hydroxypropyl]- $\omega$ -(dodecyldimethylammonio)-, dichloride (9CI) (CA INDEX NAME)

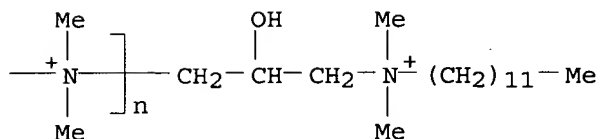
PAGE 1-A



● 2 Cl<sup>-</sup>

● 2 Cl<sup>-</sup>

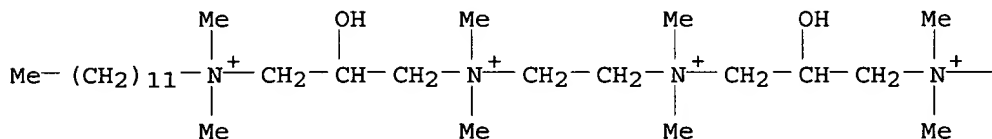
PAGE 1-B



RN 103526-33-6 HCAPLUS

CN 1,3-Propanediaminium, N,N'-1,2-ethanediylbis[N'-dodecyl-2-hydroxy-N,N,N',N'-tetramethyl-, tetrachloride (9CI) (CA INDEX NAME)

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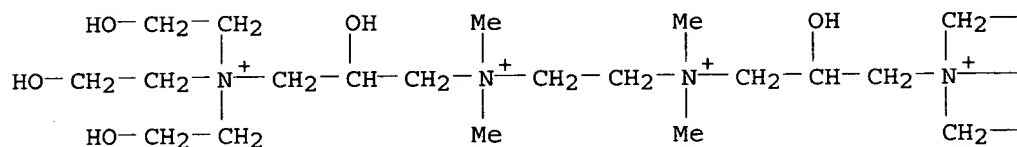
● 4 Cl<sup>-</sup>

— (CH<sub>2</sub>)<sub>11</sub>—Me

RN 103526-34-7 HCAPLUS

CN 1,3-Propanediaminium, N,N''-1,2-ethanediylbis[2-hydroxy-N',N',N'-tris(2-hydroxyethyl)-N,N-dimethyl-, tetrachloride (9CI) (CA INDEX NAME)

PAGE 1-A



● 4 Cl<sup>-</sup>

PAGE 1-B

— CH<sub>2</sub>—OH

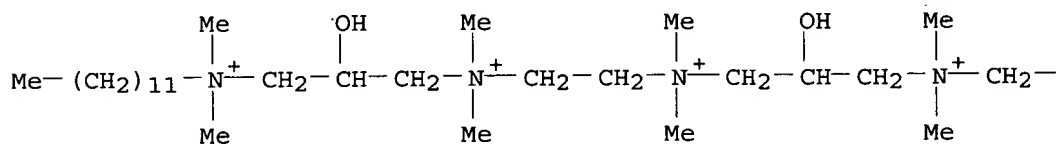
— CH<sub>2</sub>—CH<sub>2</sub>—OH

— CH<sub>2</sub>—OH

RN 103526-37-0 HCAPLUS

CN 4,7,11,14,18,21-Hexaazoniatetracosane-1,24-diaminium, N,N'-didodecyl-2,9,16,23-tetrahydroxy-N,N,N',N',4,4,7,7,11,11,14,14,18,18,21,21-hexadecamethyl-, octachloride (9CI) (CA INDEX NAME)

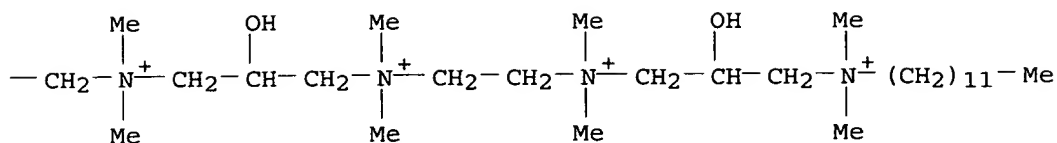
PAGE 1-A



● 8 Cl<sup>-</sup>



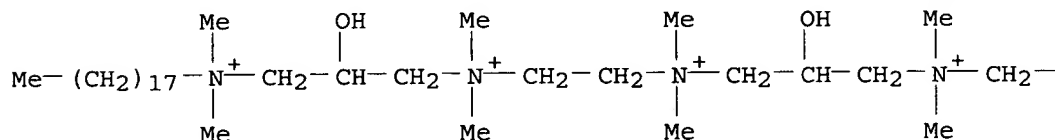
PAGE 1-B



RN 103526-38-1 HCAPLUS

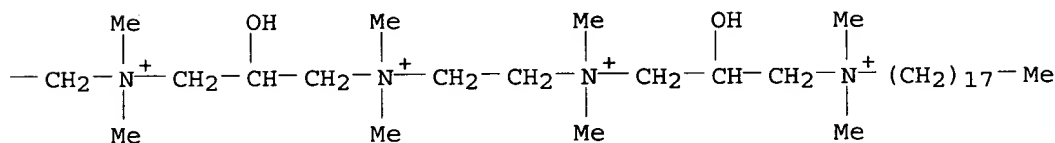
CN 4,7,11,14,18,21-Hexaazoniatetracosane-1,24-diaminium, 2,9,16,23-tetrahydroxy-N,N,N',N',4,4,7,7,11,11,14,14,18,18,21,21-hexadecamethyl-N,N'-dioctadecyl-, octachloride (9CI) (CA INDEX NAME)

PAGE 1-A



● 8 Cl<sup>-</sup>

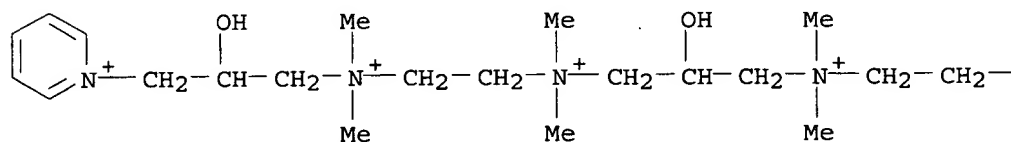
PAGE 1-B



RN 103526-39-2 HCAPLUS

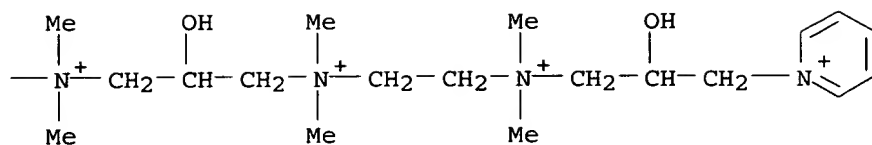
CN Pyridinium, 1,1'-(2,9,16,23-tetrahydroxy-4,4,7,7,11,11,14,14,18,18,21,21-dodecamethyl-4,7,11,14,18,21-hexaazoniatetracosane-1,24-diyl)bis-, octachloride (9CI) (CA INDEX NAME)

PAGE 1-A



● 8 Cl<sup>-</sup>

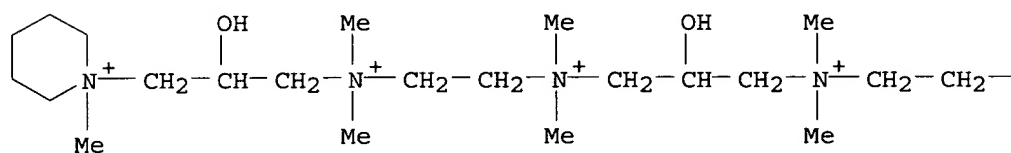
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RN 103526-40-5 HCAPLUS

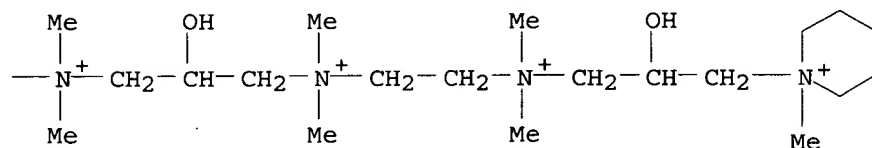
CN Piperidinium, 1,1'-(2,9,16,23-tetrahydroxy-4,4,7,7,11,11,14,14,18,18,21,21-dodecamethyl-4,7,11,14,18,21-hexaazoniatetracosane-1,24-diyl)bis[1-methyl-, octachloride (9CI) (CA INDEX NAME)

PAGE 1-A



● 8 Cl<sup>-</sup>

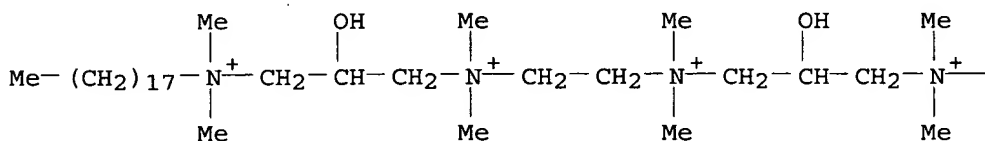
PAGE 1-B



RN 103548-76-1 HCAPLUS

CN 1,3-Propanediaminium, N,N'-1,2-ethanediylbis[2-hydroxy-N,N,N',N'-tetramethyl-N'-octadecyl-, tetrachloride (9CI) (CA INDEX NAME)

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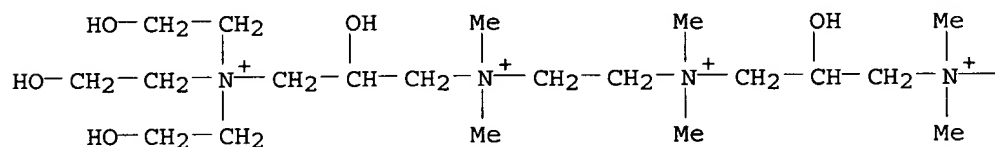


● 4 Cl<sup>-</sup>

— (CH<sub>2</sub>)<sub>17</sub>—Me

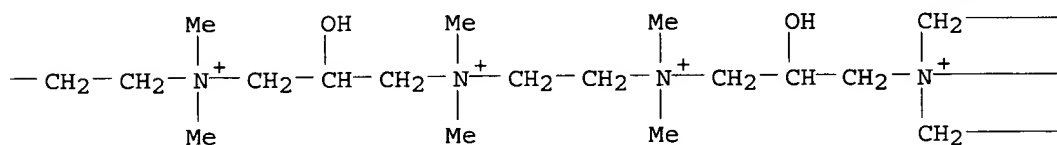
RN 103548-77-2 HCAPLUS  
 CN 4,7,11,14,18,21-Hexaazoniatetracosane-1,24-diaminium, 2,9,16,23-tetrahydroxy-N,N,N,N',N',N'-hexakis(2-hydroxyethyl)-4,4,7,7,11,11,14,14,18,18,21,21-dodecamethyl-, octachloride (9CI) (CA INDEX NAME)

PAGE 1-A



● 8 Cl<sup>-</sup>

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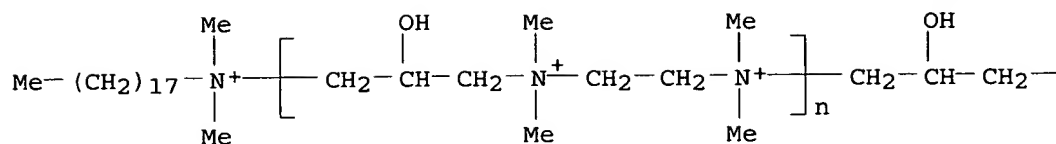
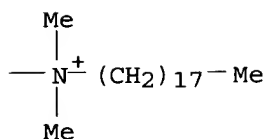
PAGE 1-C

— CH<sub>2</sub>—OH

— CH<sub>2</sub>—CH<sub>2</sub>—OH

— CH<sub>2</sub>—OH

RN 103710-02-7 HCAPLUS  
 CN Poly[(dimethylininio)-1,2-ethanediyl(dimethylininio)(2-hydroxy-1,3-propanediyl) dichloride], α-[3-(dimethyloctadecylammonio)-2-hydroxypropyl]-ω-(dimethyloctadecylammonio)-, dichloride (9CI) (CA INDEX NAME)

● 2 Cl<sup>-</sup>● 2 Cl<sup>-</sup>

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=> fil hcaplus;s chu y?/au;s lasoud m?/au;s gebeyehu g?/au

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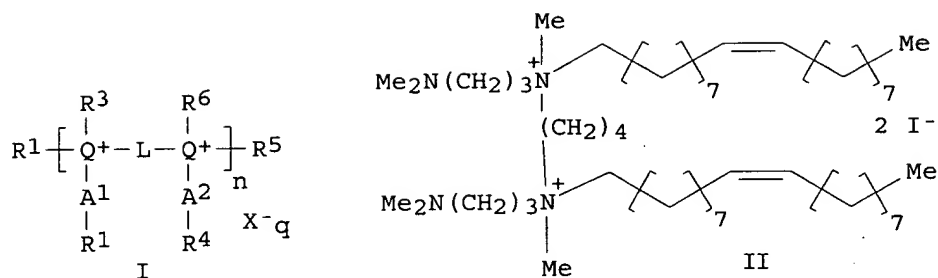
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L15 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2005 ACS on STN  
 2000:335366 Document No. 132:334312 synthesis and activity of transfection reagents for transport of biol. active agents or substances into cells.  
**Chu, Yongliang; Masoud, Malek; Gebeyehu, Gulilat**  
 (Life Technologies, Inc., USA). PCT Int. Appl. WO 2000027795 A1 20000518, 130 pp. DESIGNATED STATES: W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1999-US26825 19991112. PRIORITY: US 1998-PV108117 19981112.

Searched by: Mary Hale 571-272-2507 REM 1D86

GI



AB Synthesis and activity of transfection reagents (I) [Q = N, O, S; L = (un)substituted alkyl, ether, polyether, amide, polyamide, ester, sulfide, urea, thiourea, guanidyl, carbamoyl, carbonate, phosphate, sulfate, sulfoxide, imine, carbonyl, secondary amine; R1-R6 independently = (un)substituted alkyl, alkenyl, aryl, ether; A1, A2 independently = CH2O, CH2S, CH2NH, CO, C=NH, CS, alkyl; X = physiol. acceptable anion; n = 1-1000; q = number of pos. charge divided by valence of anion], cationic lipids capable of facilitating transport of biol. active agents or substances into cells, are disclosed. Thus, I [R1, R4 = oleyl; R2, R5 = Me2N(CH2)3; R3, R6 = Me; A1, A2 = CH2; L = (CH2)4; X = I] (II) is prepared by reaction of bis-1,4-oleyl-1,4-butanediamine with acrylonitrile followed by reduction of nitrile to amine and quaternization of amine with Me iodide. II shows an activity of 37.8 ng/βgal/cm2 in DNA delivery. Formulations containing I are given.